

WHAT IS CLAIMED IS:

1. A lens driving device comprising:
a moving body equipped with a lens and a driving magnet attached to the lens; and
5 a fixed body that is equipped with a driving coil that forms together with the driving magnet a magnetic circuit and moves the moving body in an optical axis direction of the lens between a first lens retaining position and a second lens retaining position and retains the moving body at the first and second lens retaining positions;
10 and a magnetic member that is disposed opposite at least one of two end sections in the optical axis direction of the driving magnet.
2. A lens driving device according to claim 1, wherein the moving body is retained at the first lens retaining position by magnetic attraction
15 caused by the driving magnet and the magnetic member when energization of the driving coil is stopped.
3. A lens driving device according to claim 1, wherein the moving body moves between the first lens retaining position and the second lens
20 retaining position when the driving coil is energized.
4. A lens driving device according to claim 1, wherein the moving body is retained at the first lens retaining position by magnetic attraction

caused by the driving magnet and the magnetic member when energization of the driving coil is stopped, and the moving body moves between the first lens retaining position and the second lens retaining position when the driving coil is energized.

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5. A lens driving device according to claim 1, wherein the magnetic member includes a first magnetic member that is disposed adjacent to the first lens retaining position and a second magnetic member that is disposed adjacent to the second lens retaining position.

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6. A lens driving device according to claim 5, wherein the moving body is retained at the first lens retaining position by magnetic attraction caused by the driving magnet and the first magnetic member when energization of the driving coil is stopped.

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7. A lens driving device according to claim 5, wherein the moving body is retained at the second lens retaining position by magnetic attraction caused by the driving magnet and the second magnetic member when energization of the driving coil is stopped.

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8. A lens driving device according to claim 5, wherein energization of the driving coil is stopped when magnetic attraction caused by the driving magnet and the first magnetic member retains the moving

body at the first lens retaining position, and energization of the driving coil is stopped when magnetic attraction caused by the driving magnet and the second magnetic member retains the moving body at the second lens retaining position.

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9. A lens driving device according to claim 1, wherein the fixed body includes a spring member that moveably supports the moving body in the optical axis direction.

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10. A lens driving device according to claim 1, wherein the moving body includes a back yoke provided on a side of the driving magnet opposite the driving coil.

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11. A lens driving device according to claim 1, wherein the driving coil is in a cylindrical shape that encircles the moving body, and the fixed body includes a stator yoke that generally encircles the driving coil.

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12. A lens driving device according to claim 11, wherein the fixed body has a generally rectangular cross section having an opening to define a cornered C-letter shape.

13. A lens driving device comprising:

a moving body including a cylindrical lens barrel, a lens mounted

inside the lens barrel and a driving magnet attached outside the lens barrel;
and

a fixed body that is disposed adjacent to an outer circumferential
surface of the moving body, wherein the fixed body includes a driving coil
5 that forms together with the driving magnet a magnetic circuit; and

a magnetic member that is disposed adjacent to at least one of two
end sections in the optical axis direction of the driving magnet for
magnetically retaining the moving body.

10 14. A lens driving device according to claim 13, wherein the
moving body is moveable with respect to the fixed body in an optical axis
direction of the lens between a first lens retaining position and a second lens
retaining position when the driving coil is energized.

15 15. A lens driving device according to claim 14, wherein the
magnetic member includes a first magnetic member that is disposed
adjacent to the first lens retaining position and a second magnetic member
that is disposed adjacent to the second lens retaining position.

20 16. A lens driving device according to claim 15, wherein the driving
coil is not energized when magnetic attraction caused by the driving magnet
and the first magnetic member retains the moving body at the first lens
retaining position,

17. A lens driving device according to claim 15, wherein the driving coil is not energized when magnetic attraction caused by the driving magnet and the second magnetic member retains the moving body at the second lens retaining position.

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18. A lens driving device according to claim 15, wherein the driving coil is not energized when magnetic attraction caused by the driving magnet and the first magnetic member retains the moving body at the first lens retaining position, and the driving coil is not energized when magnetic attraction caused by the driving magnet and the second magnetic member retains the moving body at the second lens retaining position.

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19. A lens driving device according to claim 13, wherein the fixed body includes a spring member that moveably supports the moving body in the optical axis direction.

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20. A lens driving device according to claim 13, wherein the lens barrel of the moving body is a back yoke for the driving magnet.

21. A lens driving device according to claim 13, wherein the driving coil is in a cylindrical shape that encircles the moving body, and the fixed body includes a stator yoke that generally encircles the driving coil.

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22. A lens driving device according to claim 21, wherein the fixed body has a generally rectangular cross section having an opening to define a cornered C-letter shape.